CLAIMS

1. A process for producing pellet of ethylene-vinyl alcohol copolymer comprising the steps of:

introducing into an apparatus an ethylene-vinylalcohol copolymer solution containing 50 parts by weight or more of alcohol having a boiling point of 100°C or less with respect to 100 parts by weight of an ethylene-vinylalcohol copolymer, contacting the solution with water in said apparatus to let out said alcohol with water and then letting out from said apparatus an ethylene-vinylalcohol copolymer hydrous composition containing 0 to 10 parts by weight of said alcohol and 10 to 1000 parts by weight of water with respect to 100 parts by weight of the ethylene-vinylalcohol copolymer (step 1);

cutting the ethylene-vinylalcohol copolymer hydrous composition let out from said apparatus in the step 1 to obtain ethylene-vinylalcohol copolymer hydrous composition pellets (step 2);

introducing the ethylene-vinylalcohol copolymer hydrous composition pellets obtained in the step 2 into a dryer to reduce a water content of the pellets (step 3);

melt-kneading the pellets, whose water content is reduced in the step 3, in an extruder (step 4); and

cutting the ethylene-vinylalcohol copolymer discharged from the extruder in the step 4 to obtain the pellet of

ethylene-vinyl alcohol copolymer (step 5).

2. The process for producing pellet of ethylene-vinyl alcohol copolymer according to Claim 1, wherein an ethylene content of said ethylene-vinylalcohol copolymer is 3 to 70 mol% and a degree of saponification thereof is 80 mol% or more.

3. The process for producing pellet of ethylene-vinyl alcohol copolymer according to Claim 1, wherein said alcohol is methanol.

4. The process for producing pellet of ethylene-vinyl alcohol copolymer according to Claim 1, wherein in the step 1,

said ethylene-vinylalcohol copolymer solution is introduced into a vessel;

the solution is contacted with water vapor in said vessel to let out said alcohol with water vapor; and

then the ethylene-vinylalcohol copolymer hydrous composition is let out from said vessel.

5. The process for producing pellet of ethylene-vinyl alcohol copolymer according to Claim 4, wherein said ethylene-vinylalcohol copolymer solution is continuously introduced into a tower type vessel and contacted with water vapor in the vessel.

6. The process for producing pellet of ethylene-vinyl alcohol copolymer according to Claim 5, wherein

said ethylene-vinylalcohol copolymer solution is introduced from an upper part of the tower type vessel;

water vapor is introduced from a lower part of the tower type vessel;

said ethylene-vinylalcohol copolymer solution is countercurrently contacted with water vapor;

thereafter said ethylene-vinylalcohol copolymer hydrous composition is let out from the lower part of the tower type vessel; and

said alcohol is let out with water vapor from the upper part of the tower type vessel.

7. The process for producing pellet of ethylene-vinyl alcohol copolymer according to Claim 1, wherein the ethylene-vinylalcohol copolymer hydrous composition is cut in a molten state in the step 2.

8. The process for producing pellet of ethylene-vinyl alcohol copolymer according to Claim 1, wherein said pellets obtained by cutting in the step 2 are immersed in a washing liquid to remove a saponification catalyst residue and then supplied to said dryer of the step 3.

9. The process for producing pellet of ethylene-vinyl alcohol copolymer according to Claim 1, wherein said pellets obtained by cutting in the step 2 are immersed in an aqueous solution containing at least one kind of additive selected from a group consisting of carboxylic acid, boron compound, phosphoric acid compound, alkali metal salt and alkaline earth metal salt to add said additive to the pellets, and then supplied to said dryer of the step 3.

10. The process for producing pellet of ethylene-vinyl alcohol copolymer according to Claim 1, wherein a temperature of the pellets in said dryer is 40 to 150°C in the step 3.

11. The process for producing pellet of ethylene-vinyl alcohol copolymer according to Claim 1, wherein a water content of the pellets is reduced to 10 weight % or less in the step 3.

12. The process for producing pellet of ethylene-vinyl alcohol copolymer according to Claim 1, wherein a water content of the ethylene-vinylalcohol copolymer discharged from the extruder after melt-kneading is 1 weight % or less in the step 4.

13. The process for producing pellet of ethylene-vinyl alcohol copolymer according to Claim 1, wherein water is removed from molten resin in said extruder in the step 4.

14. The process for producing pellet of ethylene-vinyl alcohol copolymer according to Claim 1, wherein at least one kind of additive selected from a group consisting of carboxylic acid, boron compound, phosphoric acid compound, alkali metal salt and alkaline earth metal salt is added in said extruder in the step 4.

15. The process for producing pellet of ethylene-vinyl alcohol copolymer according to Claim 1, wherein

said pellets obtained by cutting in the step 2 are immersed in an aqueous solution containing at least one kind of additive selected from a group consisting of carboxylic acid, boron compound, phosphoric acid compound, alkali metal salt and alkaline earth metal salt to add said additive to the pellets, and then supplied to said dryer of the step 3; and

at least one kind of additive selected from a group consisting of carboxylic acid, boron compound, phosphoric acid compound, alkali metal salt and alkaline earth metal salt is added in said extruder in the step 4.

16. The process for producing pellet of ethylene-vinyl

alcohol copolymer according to Claim 1, wherein the ethylene-vinylalcohol copolymer discharged from the extruder is cut after cooling in the step 5.

17. A process for producing an ethylene-vinylalcohol copolymer resin comprising the steps of:

introducing into an apparatus an ethylene-vinylalcohol copolymer solution containing 50 parts by weight or more of alcohol having a boiling point of 100°C or less with respect to 100 parts by weight of an ethylene-vinylalcohol copolymer, contacting the solution with water in said apparatus to let out said alcohol with water and then letting out from said apparatus an ethylene-vinylalcohol copolymer hydrous composition containing 0 to 10 parts by weight of said alcohol and 10 to 1000 parts by weight of water with respect to 100 parts by weight of the ethylene-vinylalcohol copolymer; and

contacting said ethylene-vinylalcohol copolymer hydrous composition with an aqueous solution containing carbon dioxide gas.

18. The process for producing an ethylene-vinylalcohol copolymer resin according to Claim 17, wherein

the ethylene-vinylalcohol copolymer hydrous composition let out from said apparatus is cut to obtain ethylene-vinylalcohol copolymer hydrous composition pellets;

and

then the ethylene-vinylalcohol copolymer hydrous composition pellets are contacted with said aqueous solution containing carbon dioxide gas.

19. The process for producing an ethylene-vinylalcohol copolymer resin according to Claim 17, wherein said aqueous solution containing carbon dioxide gas further contains at least one kind of additive selected from a group consisting of boron compound, phosphoric acid compound, alkali metal salt and alkaline earth metal salt.

20. The process for producing an ethylene-vinylalcohol copolymer resin according to Claim 17, further comprising the step of melt-kneading the ethylene-vinylalcohol copolymer hydrous composition contacted with said aqueous solution containing carbon dioxide gas in an extruder.

21. A process for producing an ethylene-vinylalcohol copolymer resin comprising the steps of:

contacting an ethylene-vinylalcohol copolymer with an aqueous solution containing carbon dioxide gas; and

melt-kneading the ethylene-vinylalcohol copolymer contacted with said aqueous solution in an extruder.

22. The process for producing an ethylene-vinylalcohol copolymer resin according to Claim 21, wherein pellets comprising the ethylene-vinylalcohol copolymer are contacted with said aqueous solution containing carbon dioxide gas.

23. The process for producing an ethylene-vinylalcohol copolymer resin according to Claim 21, wherein said aqueous solution containing carbon dioxide gas further contains at least one kind of additive selected from a group consisting of boron compound, phosphoric acid compound, alkali metal salt and alkaline earth metal salt.

24. The process for producing an ethylene-vinylalcohol copolymer resin according to Claim 21, wherein at least one kind of additive selected from a group consisting of boron compound, phosphoric acid compound, alkali metal salt and alkaline earth metal salt is added in said extruder.

25. The process for producing an ethylene-vinylalcohol copolymer resin according to Claim 21, wherein the ethylene-vinylalcohol copolymer discharged from said extruder is cut to obtain pellet of ethylene-vinyl alcohol copolymer.